

5/14/2018

[Dart Hawkesbury] Job Sheet - Gagnon-Donovan, Michelle



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

1.5
D212-664-201
Job Sheet 177545

**Part No:** D212-664-201**Job Qty:** 1 ea**Part Name:** Aft Crosstube - High**Part Weight:** 0 lbs**Status:** Scheduled**Priority:** Medium**Job Created:** 5/14/18**Job Tracking No:****Due Date:** 5/31/18**Created By:** Michelle Gagnon-Donovan**Type:** Stock**Description:**

Note: IIN-D212-664 REV.J/ D212-664-241 REV E IPP Rev:E 04.02.16 Reformat K/DS IPP Rev:F 06-03-29 Remove
Comments on Pick List JLM IPP Rev:G 07-04-30 As per Rev C JLM IPP Rev:H 08-05-22 up date Qty of rubber
cushion DD verf:EC IPP REV:I 14.05.27 AS PER ECN14-570 DD VERF:JLM

Ship Via:**Bill of Materials**

5050152



Dart Aerospace Ltd.
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Hawkesbury, ON K6A 1K7
CANADA
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Email: sales@dartaero.com
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Container No: S072555**Part:** D212-664-201**Job No:** 177545**Serial No/Batch:** S072555**Revision:** E/J**Inspector:**

Date: 05/18/18

4031

Job Routing									
Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea	5/31/18	5/31/18	0.00	0.00	Start Up Crosstubes-1		GP
110	Packaging	1 pcs	5/31/18	5/31/18	0.00	0.00	Packaging1-3		GP
120	CNC Bend Crosstubes	1 pcs	5/31/18	5/31/18	0.00	4.44	CNC Bend Crosstube		DAS 18-05-18
130	QC	1 pcs	5/31/18	5/31/18	0.00	0.00	QC15		38
140	Crosstubes	1 pcs	5/31/18	5/31/18	0.00	4.99	Crosstubes-1		GP 9-89
150	HandFXtube	1 pcs	5/31/18	5/31/18	0.00	1.25	HandFinish5		GP 18-25-03
160	QC	1 pcs	5/31/18	5/31/18	0.00	0.00	QC7-1		EB
170	QC	1 pcs	5/31/18	5/31/18	0.00	0.00	QC5		EB
180	Outsource	1 pcs	5/31/18	5/31/18			SKY002-VC	5	18/06/04
190	Packaging	1 pcs	5/31/18	5/31/18	0.00	0.00	Packaging2		18/06/04
200	QC	1 pcs	5/31/18	5/31/18	0.00	0.00	QC5		IMP. 04/06/2018
210	SprayPaint	1 pcs	5/31/18	5/31/18	0.00	1.47	Spray Paint		AR JUN 1 8 2018
220	QC	1 pcs	5/31/18	5/31/18	0.00	0.00	QC14		IMP 16/06/2018
230	Crosstubes	1 pcs	5/31/18	5/31/18	0.00	1.47	Crosstube		15-06-27
240	QC	1 pcs	5/31/18	5/31/18	0.00	0.00	QC5		JUN 23 2018
250	Packaging	1 pcs	5/31/18	5/31/18	0.00	0.00	Packaging1-3		JUN 23 2018
260	QC	1 pcs	5/31/18	5/31/18	0.00	0.00	QC4		JUN 23 2018
270	Packaging	1 pcs	5/31/18	5/31/18	0.00	0.00	Packaging3-1		JUN 23 2018
275	DC	1 pcs	5/31/18	5/31/18	0.00	0.00	DC		JUN 23 2018
280	QC21-FG	1 Ea	5/31/18	5/31/18	0.00	0.00	QC21		JUL 2 0 2018

Part Op 120 - ***VERF SET-UP BEFORE BENDING BY: *** Bend tube as per Dwg D212-664-241 using
 Descriptions: CNC bender program 212-aft

140 - 1-Drill pilot holes in tube as per Dwg D212-664-241 using drill Jig DT8550, DT8551, drill table DT8577 and locate tower holes #8 as per QSI0010. 2-Ream hole to finish size in tube as per Dwg D212-664-241 using drill Jig DT8550 & DT8551. Check dimensions between holes, both sides on both cuffs, to ensure alignment with saddle holes. 3-Scribe part # and batch # using vibrating stylus as per Dwg D212-664-241 4- ***WEAR LATEX GLOVES HANDLING CROSSTUBE. *** Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D212-664-241

150 - ***IMMEDIATELY AFTER GRINDING***

180 - ***WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE.*** Issue P/O: 40076 LIQUID PENETRANT INSPECTION AS PER QSI 038 OR LPI AS PER ASTM 1417 LEVEL 2

190 - ***WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE.***

200 - ***WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE.*** Inspect for damage & ensure results are as per Dwg D212-664-241

210 - *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE*** PRIMER 138847 PAINT 138863

220 - Then, Wrap in plastic bag to protect from scratches

230 - *****LAY DOWN CORSTUBE ON TABLE AND PUT DT10302 PINS IN SADDLE HOLE FACING UP, USE HOLE IN TAPE MESURE TO PUT IN PINS FOR LOCATING CENTER OF CROSSTUBE. ***** 1- Abrade mating surfaces of support and crosstube with 180 grit sandpaper, clean the area with MEK or equivalent as per dwg 2- Install supports with Proseal 890 per D212-664-241 and QSI 015 A/R Proseal 890 Batch: 138784 EXP: 09/18

PROSEAL CURE TIME 72 HOURS: Start: 16/06/2018 Finish: 19/06/2018 3- Install clamps with rubber cushion (ENSURE CLAMPS ARE INSTALL ON TOP SIDE OF CROSSTUBE) using DT9565 as per Dwg D212-664-241. ***Torque all clamps to 80-100 IN-LBS.***

240 - ***RE-CHECK TORCQUE ON CLAMP AFTER PROSEAL HAS CURED FOR 72HOURS AS PER DWG.***

260 - ***VERIFY BY BATCH # TO MATCH W/O

270 - Identify and pack for shipping as per PPP D212-664-201 Location : FG098

275 - Photocopy bluefile and create labels as per PPP D212-664-201 CHG006

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D212-664-201TRN	Crosstube Turning Detail	1 Ea (1 ea)	90-Start up Operation	
D2940-1	Support	2 Ea (2 ea)	230-Crosstubes	
D3595-063-530	Rubber Cushion 0.63" Wide X 5.30" Long	4 Ea (4 ea)	230-Crosstubes	
MS21920-28	Clamp	4 Ea (4 ea)	230-Crosstubes	
AN6-40A	3/8-24 Bolt X 3" Long	4 Ea (4 ea)	250-Packaging	
AN6-41A	Bolt	2 Ea (2 ea)	250-Packaging	
D3428-1	Placard	1 Ea (1 ea)	250-Packaging	
MS21042L6	Nut	6 Ea (6 ea)	250-Packaging	
NAS1149D0663J	Washer	18 Ea (18 ea)	250-Packaging	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D212-664-201TRN	1	5	0
230-Crosstubes	D2940-1 <i>SO55687 (1)</i>	<i>2</i>	11	0
	<i>SO62606(2) → D3595-063-530 SO79500 (1)</i>	<i>4</i>	37	0
	MS21920-28 <i>SO24479</i>	<i>4</i>	75	0
250-Packaging	AN6-40A	4	127	0
	AN6-41A	2	77	0
	D3428-1	1	36	0
	MS21042L6	6	380	0
	NAS1149D0663J	18	1,111	0

Part Specifications

Specifications could not be found.

Plex 5/14/18 1:47 PM Dart.Gagnon.Michelle

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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 177545
MAY 14 2018

Item	Qty -241	Qty -241B	Part Number	Description
1	X		D212-664-241	CROSSTUBE ASSEMBLY (205/212 HIGH AFT)
2		X	D212-664-241B	CROSSTUBE ASSEMBLY (214 HIGH AFT)
3	1	1	D6006-129	CROSSTUBE
4	2		D2940-1	SUPPORT
5	4	4	D3595-063-530	RUBBER CUSHION
6		2	D5018-1	SUPPORT
7	4	4	MS21920-28	CLAMP (OR MS21920-30)
8	A/R	A/R	PROSEAL 890 B-2	SEALANT, AMS-S-8802 CLASS B-2

GENERAL NOTES:

- MATERIAL: MANUFACTURED FROM D6006-129
FINISHED LENGTH = 124.362±0.020
- FINISH: a) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
b) PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
c) MASK UNDERSIDE OF CROSSTUBE AS SHOWN (ZN C6-2 / C6-3, HATCHED AREA)
d) PAINT OUTSIDE PER DART QSI 005 4.2
e) REMOVE MASKING AND APPLY MATTE CLEAR COAT
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- UNITS: INCHES UNLESS OTHERWISE NOTED.
- BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- IDENTIFICATION: SCRIBE DART PART NUMBER 'D212-664-XXX' AND BATCH NUMBER ON INSIDE OF CUFF USING VIBRATING STYLUS.
- WEIGHT: D212-664-241/-241B = 44.2 lbs
- PART IS SYMMETRIC ABOUT CENTERLINE.
- EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.

MACHINING

- RUN CUTTER OFF PART. BLEND OUT EDGE LONGITUDINALLY, TRANSITION MARKS SHOULD BE SMOOTH.

BENDING

- BEND PROGRESSIVELY WITH A MINIMUM OF 5 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 7.2% (BASED ON O.D.) IN LOWER HALF OF R35.5 BEND AND 6% (BASED ON O.D.) ON REMAINING TUBE.
- LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.

ASSEMBLY

- INSTALL D2940-1 / D5018-1 SUPPORT: ABRASE MATING SURFACE OF SUPPORT AND CROSSTUBE WITH 180-GRIT SANDPAPER AND REMOVE RESIDUE WITH MEK (OR EQUIVALENT). APPLY A 0.04" TO 0.07" THICK LAYER OF PROSEAL 890 CLASS B-2 (OR AMS-S-8802 CLASS B-2) SEALANT TO MATING SURFACE OF SUPPORT.
- INSTALL MS21920-28 CLAMPS (OR -30) WITH D3595-063-530 RUBBER CUSHIONS TO SECURE THE SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE ON TOP SIDE OF CROSSTUBE.
- TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING. PRIOR TO PACKAGING, RE-CHECK TORQUE ON CLAMPS AFTER PROSEAL 890 SEALANT HAS CURED FOR 72 HOURS.

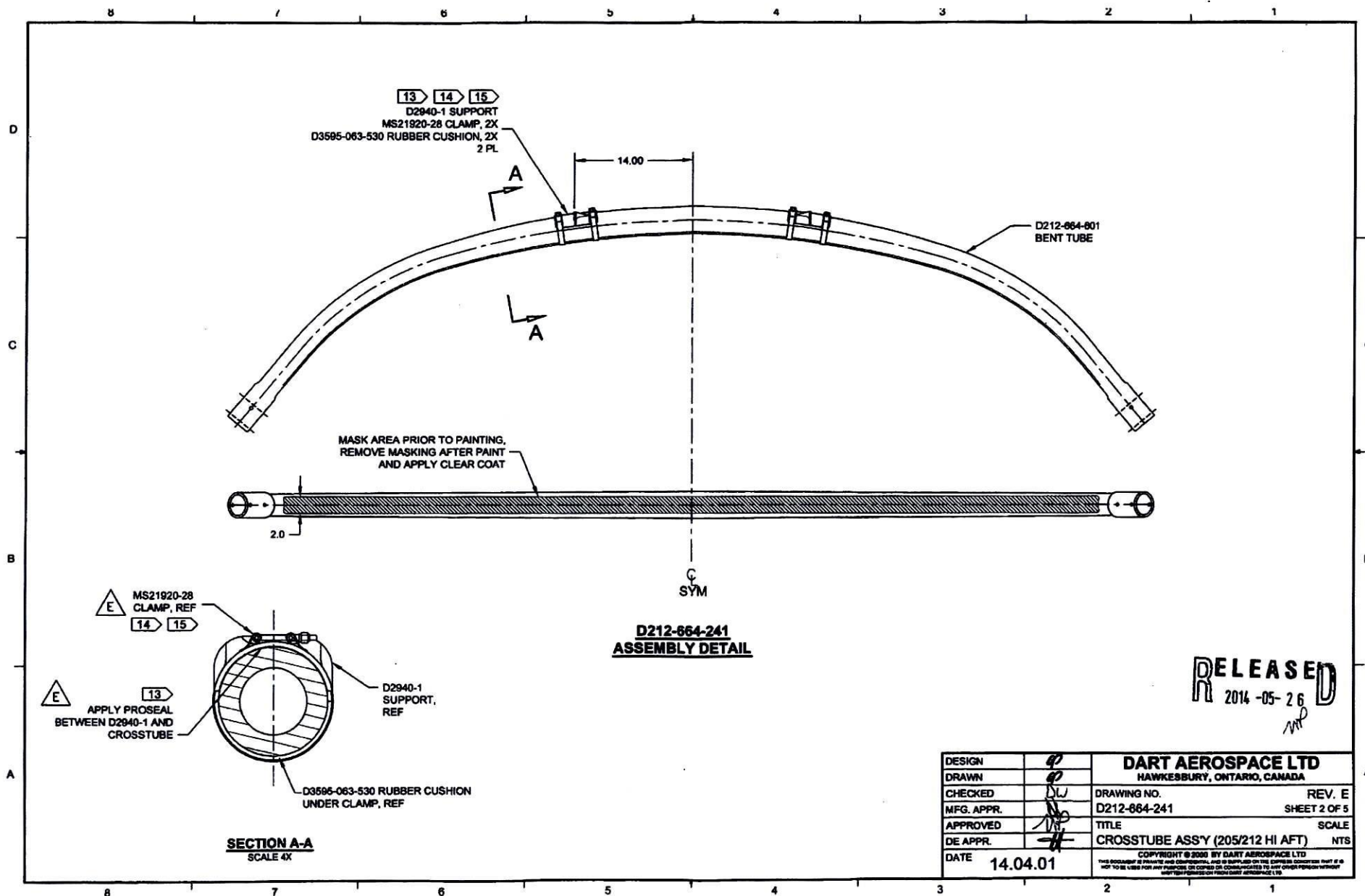
RELEASED
2014-05-26

E	D5018-1 WAS D2940-1 (-241B), PROSEAL WAS MAGNOBOND, NOTE 2: ADD INSPECTION WINDOW, NOTE 11: ALLOW 7.2% CRUSH, NOTE 15: ADD 72HR CURE AND RETORQUE FOR PROSEAL, ADD SHEET 3, CLAMPS REVERSED TO PREVENT CHAFING (ZN B7-2, B7-3), BEND HEIGHT TOL. NOW 0.25 WAS 0.13 (C1-4), INCORP DEO D-1/-2	CP	14.04.01
D	REFORMAT/REVISE GENERAL NOTES/PART LIST; REORGANIZED VIEWS AND REFORMATTED DRAWING TO CURRENT STANDARDS; ADD -241B (ZN D4-2, B4-2); REMOVED REF & ADD TOLERANCES (ZN D8-3 & C4-3, C6-3 & A8-3); RELOCATED FLAG #6 PER PAR 06-046 (ZN A5-3); MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET 4	RF	09.09.30
C	REMOVE -1009 ABRASION STRIP; ADD MAGNOBOND 6398, CUSHION, REVERSE CLAMPS	PH	07.03.08
B	ADD HOLES FOR COMPATABILITY WITH BHT/AA SKIDTUBES	PH	05.02.04
A	NEW ISSUE	CP	00.12.12
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	14.04.01		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

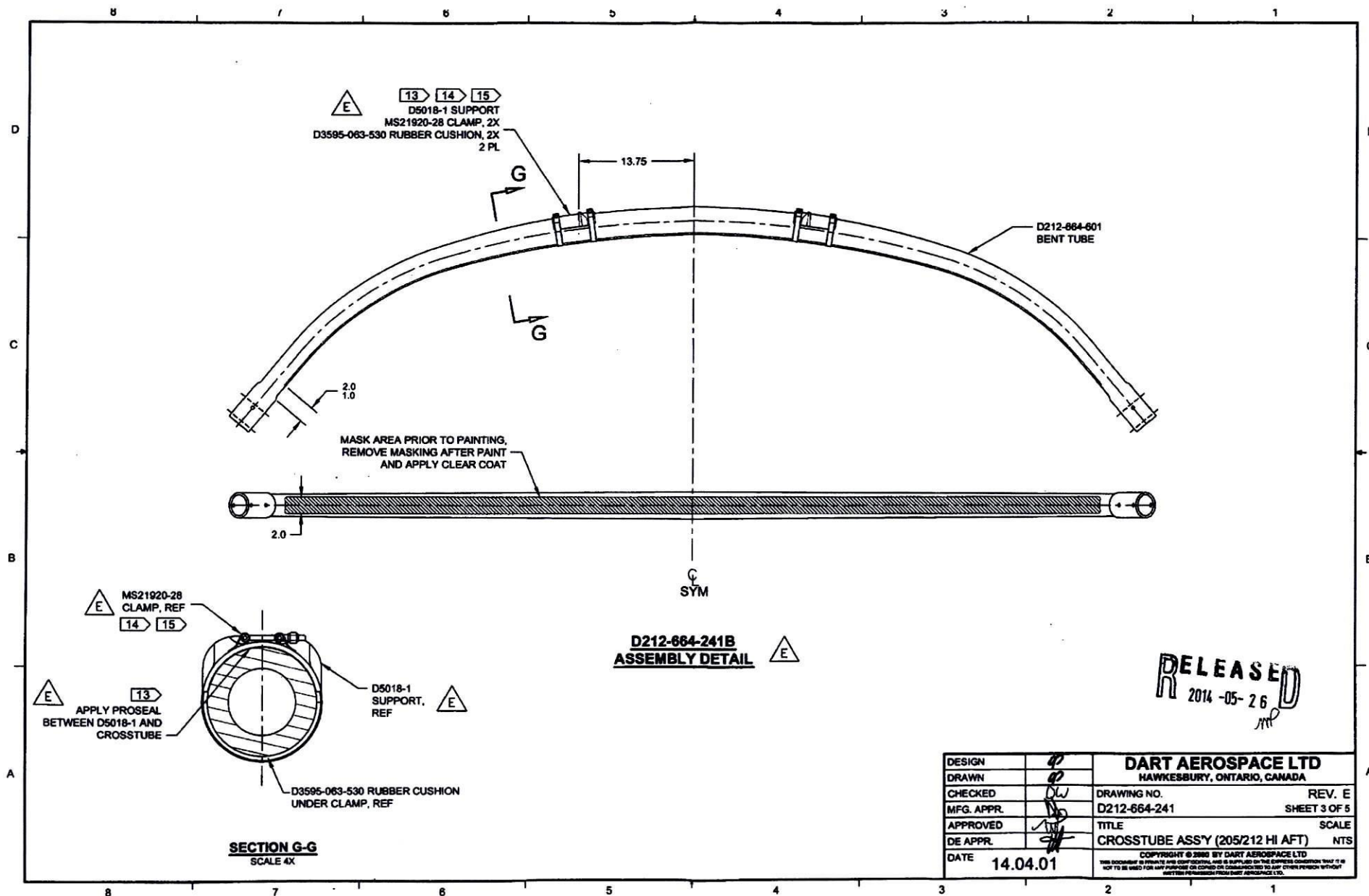
DRAWING NO. D212-664-241
REV. E
SHEET 1 OF 5
TITLE CROSSTUBE ASS'Y (205/212 HI AFT)
SCALE NTS

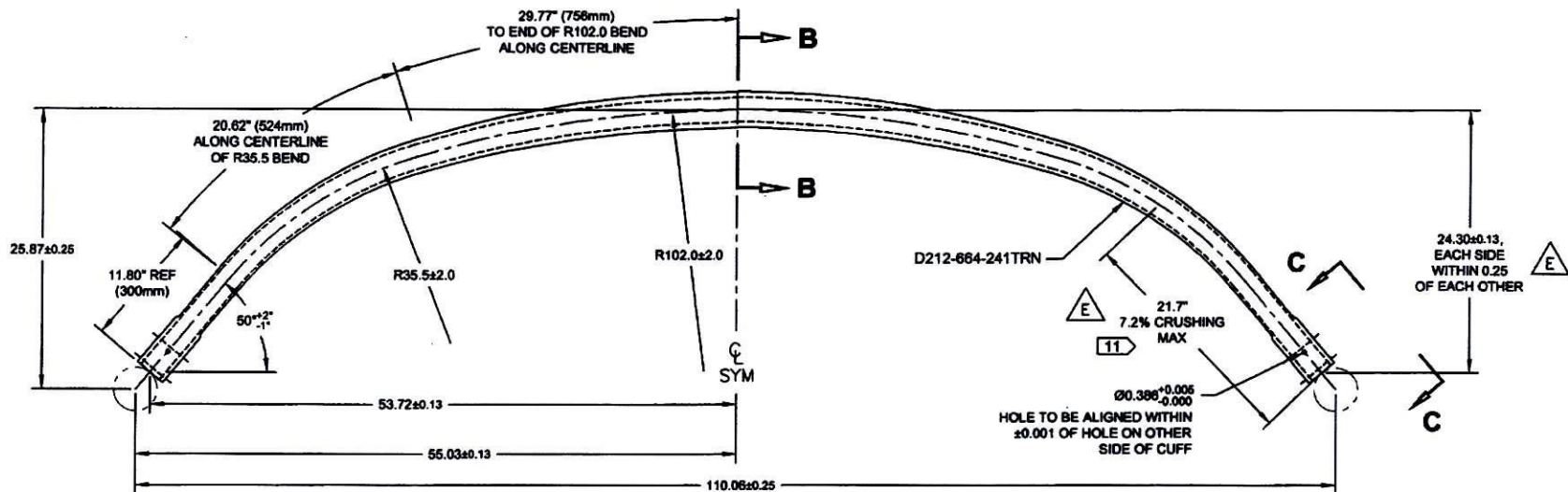
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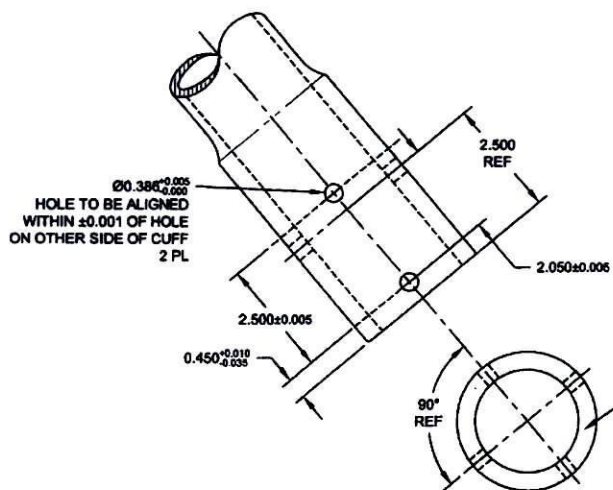
RELEASED
2014-05-26

DESIGN	<i>Q</i>	DART AEROSPACE LTD	
DRAWN	<i>Q</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>SL</i>	DRAWING NO.	REV. E
MFG. APPR.	<i>SL</i>	D212-664-241	SHEET 2 OF 5
APPROVED	<i>Q</i>	TITLE	SCALE
DE APPR.	<i>H</i>	CROSSTUBE ASS'Y (205/212 HI AFT)	NTS
DATE	14.04.01	COPYRIGHT © 2000 BY DART AEROSPACE LTD	
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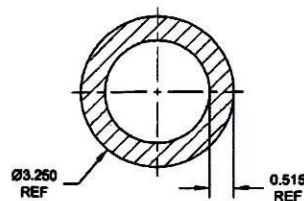




D212-664-601 11
BENDING AND DRILLING DETAIL



VIEW C-C: CUFF DETAIL
SCALE 3X



SECTION B-B
SCALE 4X

RELEASED
2014-05-26
JMD

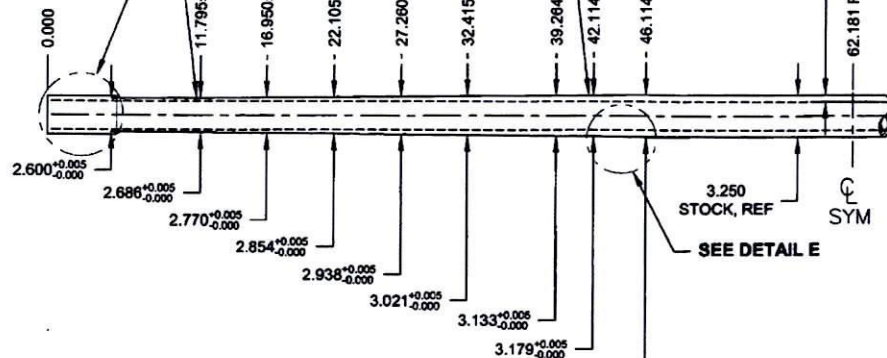
DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. E
MFG. APPR.		D212-664-241	SHEET 4 OF 5
APPROVED		TITLE	SCALE
DE APPR.		CROSSTUBE ASS'Y (205/212 HI AFT)	NTS
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R100.0 TRANSITION
BETWEEN TAPERED
SECTIONS

R100.0 TRANSITION
BETWEEN TAPERED
SECTIONS

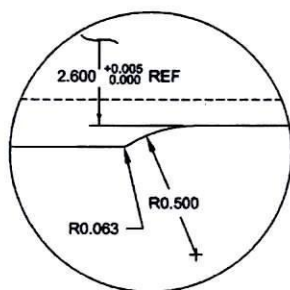
0.515 WALL
STOCK, REF

SEE DETAIL D

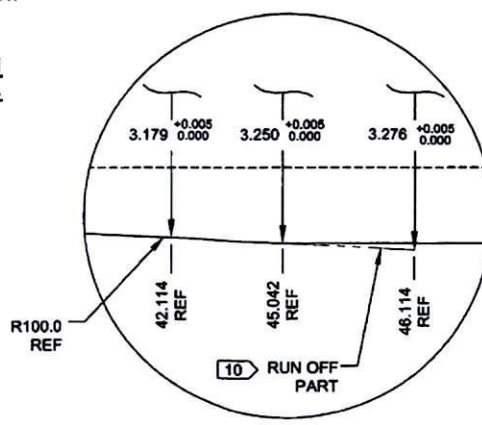


10 3.179^{+0.005}/_{-0.000} TAPER UNIFORMLY FROM
THROUGH TO 3.276^{+0.005}/_{-0.000}
RUNNING OFF PART

D212-664-241TRN TURNING DETAIL



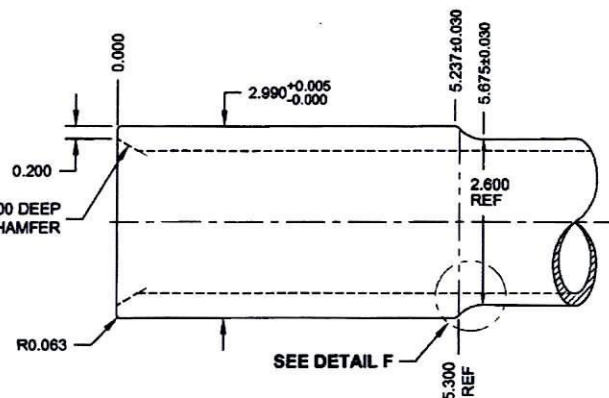
DETAIL F:
CUFF TRANSITION
SCALE 10X



DETAIL E:
TAPER RUN-OFF
NOT TO SCALE

10

30° X 0.500 DEEP
CHAMFER



DETAIL D:
CROSSTUBE CUFF
SCALE 5X

RELEASED
2014-05-26

DESIGN		DART AEROSPACE LTD
DRAWN		HAWKESBURY, ONTARIO, CANADA
CHECKED		DRAWING NO. REV. E
MFG. APPR.		D212-664-241 SHEET 5 OF 5
APPROVED		TITLE SCALE
DE APPR.		CROSSTUBE ASS'Y (205/212 HI AFT) NTS
DATE	14.04.01	COPYRIGHT © 2008 BY DART AEROSPACE LTD
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1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO040076**

Supplier: SKY002-VC
Skyservice
6120 Midfield Road
Mississauga
ON
L5P 1B1 Canada
Phone: 905-678-5636
Fax: 905-678-5841

PO No: PO040076
PO Date: 6/1/18
Due Date: 6/4/18
Purchase Order Revision:
Revision Date:
Ship-To Contact: Lavoie, Chantal
clavoie@dartaero.com

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground
Pymt Terms: Net 30
Freight Terms:
Special Comments:

Items

Line Item	Job	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	177546	D212-664-201	Aft Crosstube - High ***WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE.*** Issue P/O: LIQUID PENETRANT INSPECTION AS PER QSI 038 OR LPI AS PER ASTM 1417 LEVEL 2	Firmed	6/4/18	1 pcs	0 pcs	1 pcs	\$208.75/pcs	\$208.75
	177547			Firmed	6/4/18	1 pcs	0 pcs	1 pcs	\$208.75/pcs	\$208.75
	177545			Firmed	6/4/18	1 pcs	0 pcs	1 pcs	\$208.75/pcs	\$208.75
	177548			Firmed	6/4/18	1 pcs	0 pcs	1 pcs	\$208.75/pcs	\$208.75
Sub Total:						4	0	4		\$835.00

Grand Total: \$835.00

Order Notes

revd 6/18/2018

Procurement Quality Clauses
A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.



skyservice Work Order Traveler

Sky Service F.B.O. Inc.

10105 Ryan Avenue, Dorval, Quebec, H9P 1A2

TCCA AMO 53-89 / EASA 145.7142 / BDA AMO 385

WO #: MWO36236	Customer: Dart Aerospace Ltd.	Dept: NDT YUL	Reference: PO040076
Descr:	PN:	S/N:	Qty: 1
Make:	Model:	Reg:	A/C S/N:
TSN:	CSN:	TSO:	
Task: UNSCHEDULED			Sequence: 1

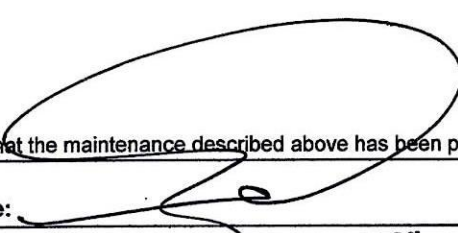
Work Required:

CARRY OUT NDT ON:

4 AFT CROSSTUBES , P/N# D212-664-201 , J/S# 177545 , 177546 , 177547 , 177548

Action Taken:						Date:	Initial/Stamp:
LPI C/O IAW ASTM E-1417M-16						JUN 01 2018	 DOT-APP 20 53-89
NO CRACK FOUND							
PEN. ZL-56, MPO13600, CLEANER SKC-S MPO13923 , DEV. MPO11715 , UV LIGHT M-20142							
<i>Description</i>	<i>Location</i>	<i>P/N</i>	<i>Qty</i>	<i>Batch</i>	<i>S/N Off</i>	<i>S/N On</i>	

I certified that the maintenance described above has been performed in accordance with the applicable standard of airworthiness.

Signature: 	ACA/SCA Stamp DOT-APP 20 53-89	Date: JUN 01 2018
Name: RAFIK MELIKIAN		



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

Container View (Active) - Master Unit Containers

Master Unit No	Container No	Part No	Part Name	From Container	Current Location	Quantity
004031	S083451	AN6-40A	3/8-24 Bolt X 3" Long	s041108	ST333	4
004031	S083450	AN6-41A	Bolt	s045844	ST333	2
004031	S083449	D3428-1	Placard	s046308	ST034	1
004031	S083448	MS21042L6	Nut	s041168	ST303	6
004031	S083447	NAS1149D0663J	Washer	s043782	ST263	18

Note: Ad hoc query view of Part.dbo.Container where Container.Active = 1.

Plex 6/23/18 8:03 AM dart.quirion.sonia